REMARKS

In the office action mailed February 3, 2006, claims 58 and 60 were rejected under 35 U.S.C. §102(b) over U.S. Patent No. 6,178,226 (to Hell et al.); claims 59 and 69 were indicated as being allowable if rewritten in independent form; claim 59 is objected to but indicated as being allowable if rewritten in independent form, and claims 35 - 57 and 61 - 67 were allowed. Claims 35, 58 and 61 were also objected to with regard to the antecedent basis for the term "x-ray output signal".

The Hell et al. reference discloses an X-ray system in which an X-ray beam is directed toward a subject 8 and an image thereof is detected at a detector 9 as shown below.

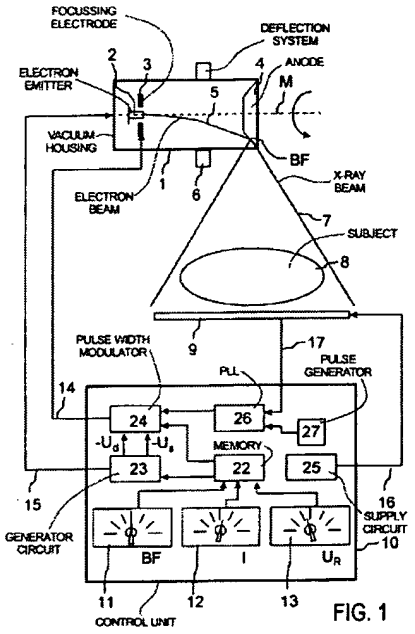


FIG. 1

Hell et al., Figure 1. The X-ray beam is provided responsive to an electron beam that is generated between a cathode electron emitter 2 and an anode 4. The Hell et al. reference states that it is an objective of the disclosure to provide variable current control independent of focal spot size on the anode (Hell et al., col. 1,. line 66 - col. 2, line 2). Such variable current control is disclosed to be provided by using a pulse width modulation of the current control signal that

modulates "the duration of the time intervals during which the focusing electrode is at the conducting-state voltage" (Hell et al., col.2, lines 44 - 48).

The system of Hell et al. also discloses that an image recording frequency signal is provided from the detector 9 to a control unit 10 via connection 17. In particular, the image recording frequency signal is provided to a phase locked loop (PLL) 26 of the control unit 10, and the PLL 26 provides an output frequency that corresponds to the sampling frequency as well as the image recording frequency (Hell et al., col.6, lines 39 - 43). This provides that pulses on the cathode electrode are synchronized with the image recording frequency of the detector (Hell el al., col.6, lines 44 - 46).

The Hell et al. reference, however, does not disclose that the pulses current control signal are adjusted *responsive to changes in conditions within the X-ray tube* as stated in claim 58 of the present application. The signal received by the detector, in fact, has passed through the subject prior to being detected. Claim 58 includes, in part:

> a control system that receives said detected X-ray signal and adjusts said control signal responsive to changes in conditions *within said X-ray tube* to ensure that said X-ray output is substantially *maintained at a predetermined value.*

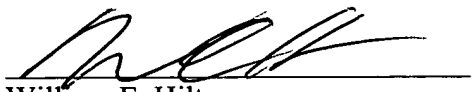
The control system of the Hell et al. reference at best adjusts the control signal responsive to the frequency of the detected signal at the detector *outside* of the X-ray tube to ensure that the control signal pulses are synchronized with the image recording frequency of the detector. The control system of the Hell et al. reference, therefore, is not responsive to conditions within the X-ray tube and does not function to maintain the output at a predetermined value.

Claim 58, therefore, is in condition for allowance. Claim 60 depends from claim 58 and further limits the subject matter of claim 58. Claim 60 is also submitted to be in condition for

allowance.

Each of claims 35 - 58 and 60 - 70, therefore, is submitted to be in condition for allowance. Favorable action consistent with the above is respectfully requested.

Respectfully submitted,



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